

## CLAIMS

What is claimed is:

1. An apparatus for separating two flanges, comprising:
  - a first prying grip having at least one flange contact member;
  - a second prying grip having at least one flange contact member; and
  - means for separating said flange contact members.
2. The apparatus of claim 1, wherein said flange contact members simultaneously occupy at least one recess in a flange.
3. The apparatus of claim 1, wherein said means for separating comprises a threaded hole extending through said first prying grip for accepting a first threaded member.
4. The apparatus of claim 3, wherein said means for separating additionally comprises a threaded hole extending through said second prying grip for accepting a second threaded member.
5. The apparatus of claim 4, wherein each said threaded member is a threaded bolt.
6. The apparatus of claim 4, wherein the threaded hole of said first prying grip is in alignment with the threaded hole of said second prying grip when one flange contact member of said first prying grip and one flange contact member of said second prying grip is inserted into a flange recess.
7. The apparatus of claim 1, wherein one of said at least one flange contact member of said first prying grip is inserted into a first flange recess and one of said at least one flange contact member of said second prying grip is inserted into a second flange recess.
8. The apparatus of claim 7 wherein said first flange recess and said second flange recess are each generally cylindrical.
9. The apparatus of claim 1 wherein said first and second prying grips are fabricated from a metal selected from the group consisting of steel and other iron alloys.

10. The apparatus of claim 1 wherein said first and second prying grips are fabricated from a material having a lower hardness value than a material from which said flanges are composed.

11. A method for separating two flanges comprising the steps of:

- providing a prying grip assembly comprising at least one pair of prying grips comprising a first prying grip having at least one flange contact member and a second prying grip having at least one flange contact member, and providing a means for separating said flange contact members;
- providing at least one recess in at least one flange;
- inserting said flange contact members into said at least one recess; and
- operating said means for separating said flange contact members so as to separate said two flanges.

12. The method of claim 10 wherein providing said means for separating comprises the steps of:

- providing a threaded hole and a threaded member in each of said pair of prying grips;
- inserting the threaded member of said first prying grip into the threaded hole of said first prying grip and inserting the threaded member of said second prying grip into the threaded hole of said second prying grip such that both threaded members are aligned along an axis and are in contact the one with the other.

13. The method of claim 11 wherein the step of operating said means for separating said flange contact members comprises the steps of:

- threading said threaded member of said first prying grip so as to push against the threaded member of said second prying grip.

14. An apparatus for separating two split flanges, comprising:

- a first prying grip having at least one flange contact member;
- a second prying grip having at least one flange contact member;
- means for separating said flange contact members; and

at least one recess residing in one of said two flanges adapted to accept said flange contact members.

15. The apparatus of claim 14, wherein said means for separating comprises a threaded hole extending through said first prying grip adapted to accept a threaded member.

16. The apparatus of claim 15, wherein said means for separating additionally comprises a threaded hole extending through said second prying grip adapted to accept a threaded member.

17. The apparatus of claim 4, wherein said threaded member is a threaded bolt.

18. System for disassembling a jet engine split casing, comprising:  
a first prying grip having at least one flange contact member;  
a second prying grip having at least one flange contact member; and  
means for separating said flange contact members; and  
a jet engine split casing comprising two split cases each comprising at least one flange.

19. The system of claim 18, wherein said flange contact members simultaneously occupy at least one recess in a flange.

20. The system of claim 18, wherein said means for separating comprises a threaded hole extending through said first prying grip for accepting a first threaded member.

21. The system of claim 20, wherein said means for separating additionally comprises a threaded hole extending through said second prying grip for accepting a second threaded member.

22. The system of claim 21, wherein each said threaded member is a threaded bolt.

23. The system of claim 21, wherein the threaded hole of said first prying grip is in alignment with the threaded hole of said second prying grip when one flange contact member of said first prying grip and one flange contact member of said second prying grip is inserted

into a flange recess.

24. The system of claim 18, wherein one of said at least one flange contact member of said first prying grip is inserted into a first flange recess and one of said at least one flange contact member of said second prying grip is inserted into a second flange recess.

25. The system of claim 24 wherein said first flange recess and said second flange recess are each circular.

26. Method for separating two split cases of a gas turbine engine comprising the steps of:  
providing a prying grip assembly comprising at least one pair of prying grips comprising a first prying grip having at least one flange contact member and a second prying grip having at least one flange contact member, and providing a means for separating said flange contact members;  
providing at least one recess in at least one flange of a split case of a gas turbine engine;  
inserting said flange contact members into said at least one recess; and  
operating said means for separating said flange contact members so as to separate said two flanges.

27. The method of claim 26 wherein providing said means for separating comprises the steps of:

providing a threaded hole and a threaded member in each of said pair of prying grips;  
inserting the threaded member of said first prying grip into the threaded hole of said first prying grip and inserting the threaded member of said second prying grip into the threaded hole of said second prying grip such that both threaded members are aligned along an axis and are in contact the one with the other.

28. The method of claim 27 wherein the step of operating said means for separating said flange contact members comprises the steps of:

threading said threaded member of said first prying grip so as to push against

the threaded member of said second prying grip.